What is claimed is:

1. A method of forming a porous medium comprising:

applying pressure to a first portion of a medium precursor including inorganic particles;

separately applying pressure to a second portion of the medium precursor; and

sinter bonding the inorganic particles together.

2. A porous medium comprising:

a first portion having a first axial dimension and

a second portion having a second axial dimension, the second axial dimension being greater than the first axial dimension, wherein the first and second portions each have a predetermined porosity.

3. A porous medium comprising:

a porous sintered inorganic body portion having a first end and a porous sintered inorganic end portion closing the end of the body portion, the porous body portion and the porous end portion comprising a unitary structure.

4. A porous element comprising:

a porous medium of sintered inorganic particles; and

a porous substrate, at least a portion of the sintered inorganic particles being disposed within pores of the porous substrate mechanically interlocking the porous medium and the porous substrate.

5. A process for making a porous element comprising:

contacting a porous substrate with a slurry including a liquid medium and inorganic particles; and

sintering the inorganic particles together within pores of the porous substrate to mechanically interlock the sintered inorganic particles to the porous substrate.

6. A porous medium comprising:

a porous sintered inorganic structure derived from a pressed mixture including a liquid medium and a plurality of inorganic particles having a nominal first size.

7. A method comprising:

applying pressure to a slurry including a liquid medium and inorganic particles; and

separating at least some of the liquid medium from the slurry in response to the pressure.

8. A porous medium comprising:

a mass of sintered inorganic particles having a porosity of greater than about 50%.

9. A method comprising:

forming a mixture including at least a liquid medium, a plurality of inorganic particles having a nominal first size and a plurality of inorganic particles having a nominal

second size, said first size being less than the second size; and

sinter bonding the plurality of inorganic particles having a nominal first size and the plurality of inorganic particles having a nominal second size together.

10. A porous medium comprising:

a first plurality of inorganic regions having a first nominal size;

a second plurality of second inorganic regions having a second nominal size, wherein the first nominal size is less than the second nominal size, and wherein the first plurality of inorganic regions is interspersed between the second plurality of inorganic regions; and

a plurality of bonds interposed between the first plurality of inorganic regions and the second plurality of inorganic regions.

11. A mold apparatus comprising:

a mold cavity arranged to contain a slurry;

a first die arranged to press a first portion of the slurry in the mold cavity; and

a second die arranged to separately press a second portion of the slurry in the mold cavity.